



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,144	05/18/2006	Jeremy Cannon	2099.00041	9242
Kenneth I Kohn Kohn and Associates 30500 Northwestern Hwy Suite 410 Farmington Hills, MI 48334				
7590 06/24/2009			EXAMINER TANNER, JOCELYN C	
			ART UNIT 3731	PAPER NUMBER
			MAIL DATE 06/24/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/580,144

**Applicant(s)**

CANNON ET AL.

**Examiner**

JOCELIN C. TANNER

**Art Unit**

3731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-20 and 22-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-20 and 22-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This Office Action is in response to the Amendment filed 21 January 2009.

Claims 1, 3-20 and 22-30 are currently pending. The Examiner acknowledges amendments to claims 1, 7, 8, 17, 20 and 27-30 and the cancellation of claims 2 and 21.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 3, 5-10, 14, 15, 17 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US Patent No. 5,788,676) in view of Riza et al. (US Patent No. 5,993,471) and further in view of Jacobsen et al. (US Patent No. 4,180,068).**

3. Regarding claims **1, 3 and 6**, Yoon discloses a trocar (10) having an insert end with a housing or "chamber" (14) wherein a pair of universal seal (16a, 16b) are positioned in the proximal and distal ends of the chamber to provide an air and fluid tight seal when engaging or not engaging an instrument (column 2, lines 37-40, column 4, lines 1-10, column 7, lines 19-22, Fig.2). However, Yoon fails to explicitly disclose perpendicular diaphragms.

Riza et al. teaches two deformable diaphragms having slits that are perpendicular with respect to other (column 7, lines 53-56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided consecutive diaphragms having perpendicular slits to enhance sealing structure.

However, the combination of Yoon and Riza et al. fails to disclose a downflow lumen having an outlet opening into an instrument lumen and an inlet port opposite thereto.

Jacobsen et al. teaches a trocar including lumens disposed therein for irrigation of fluid through a down flow lumen (27) and into the instrument lumen (16) wherein an inlet port (12) is opposite thereto and a substance removal lumen (25) that removes substances in the instrument lumen (column 3, lines 60-64, Figs. 1, 2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the device of the combination of Yoon and Riza et al. with a downflow lumen, as taught by Jacobsen et al., to simultaneously introduce and withdraw fluids from the body of a patient.

4.

5. Regarding claim 5, Yoon discloses deformable diaphragms (16a, 16b) having at least one slit (column 6, lines 60-62) through which an instrument is inserted.

6. Regarding claims 7 and 8, Jacobsen et al. teaches a trocar catheter having substance removing means the withdrawal of fluids is performed through a lumen (16) through which an instrument is disposed via openings (20) (column 4, lines 25-28, Fig. 1).

7. Regarding claims **14 and 15**, Yoon discloses a trocar (10) formed of plastic, metal or flexible and elastic materials, i.e. rubber (column 4, lines 18-20, 46-47).
8. Regarding claims **17 and 20**, Yoon discloses the method steps of maintaining a fluid and airtight environment including the steps of introducing a surgical instrument into patient through a trocar (10) having a fluid and airtight seal wherein a pair of universal seal (16a, 16b) are positioned in the proximal and distal ends of a chamber (14) (column 3, lines 1-16). Jacobsen et al. teaches a trocar including lumens disposed therein for irrigation of fluid through a down flow lumen (27) and into the instrument lumen (16) wherein an inlet port (12) is opposite thereto and a substance removal lumen (25) that removes substances in the instrument lumen (column 3, lines 60-64, Figs. 1, 2).
9. Regarding claim **22**, Yoon discloses the method step of puncturing the abdominal wall and inserting the trocar (10) through the incision (column 9, lines 4-8).
10. Regarding claim **23**, Yoon discloses the method step of creating an incision using a needle or "obturator" (column 9, lines 4-8).
11. Regarding claim **24**, Riza et al. teaches the method step of creating an incision using a stylet or "scalpel" (column 3, lines 59-61). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a stylet to create an incision using the trocar of Yoon, as taught by Riza et al., since it was well known in the art to make an incision using a scalpel.
12. Regarding claims **25 and 26**, Yoon discloses the method of stabilizing the trocar in the incision by engaging the endcap (54) of the chamber (Fig. 2).

**13. Claims 4, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US Patent No. 5,788,676) in view of Riza et al. (US Patent No. 5,993,471) and further in view of Jacobsen et al. (US Patent No. 4,180,068), as applied to claims 3 and 17 above, and further in view of Vincent et al. (US Patent No. 5,658,298).**

14. Regarding claims **4, 18 and 19**, Yoon discloses an instrument inserted through resiliently engaging deformable diaphragms (16a, 16b) situated at each end of the chamber (column 3, lines 5-16) but fails to disclose an O-ring.

Vincent et al. teaches an O-ring (71) encircling the distal end of the inner shaft within the trocar cannula (column 4, lines 32-36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided an O-ring to the trocar of Yoon, as taught by Vincent et al., as an additional safeguard for preventing deflation of the cavity during use.

**15. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US Patent No. 5,788,676) in view of Riza et al. (US Patent No. 5,993,471) and further in view of Jacobsen et al. (US Patent No. 4,180,068), as applied to claim 1 above, and further in view of Kellogg (US Patent No. 5,968,060).**

16. Regarding claim **11**, the combination of Yoon, Riza et al. and Jacobsen et al. discloses all of the limitations previously discussed except for agitating means that are operatively connected to a trocar.

Kellogg teaches an ultrasonic trocar (10) including a handpiece assembly (50), generator (30), braking mechanism (130) and an acoustic assembly (80) through which ultrasonic energy propagates to cause vibration within the acoustic assembly (column 3, lines 17-20, Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the trocar of the combination of Yoon, Riza et al. and Jacobsen et al. with vibrating means, as taught by Kellogg, to minimize trauma and detect penetration.

17. Regarding claim 12, Kellogg discloses an automatic transmission component or agitator wherein the transducer assembly is adapted to vibrate at an ultrasonic frequency in response to electrical energy (column 2, lines 9-15).

18. Regarding claim 13, Kellogg teaches an automatic agitator that is an ultrasonic agitator (column 3, lines 16-20).

19. **Claim 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoon (US Patent No. 5,788,676) in view of Riza et al. (US Patent No. 5,993,471) and further in view of Jacobsen et al. (US Patent No. 4,180,068), as applied to claim 15 above, and further in view of Banik et al. (US Patent No. 5,256,149)**

20. Regarding claim 16, the combination of Yoon, Riza et al. and Jacobsen et al. discloses a trocar (10) formed of plastic or flexible and elastic materials, i.e. rubber (column 4, lines 18-20, 46-47, Yoon). The combination of Yoon, Riza et al. and Jacobsen et al. fails to disclose the plastic being transparent.

Banik et al. discloses a trocar (10) constructed entirely of transparent material (column 11, lines 34-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the plastic trocar of the combination of Yoon, Riza et al. and Jacobsen et al. to be transparent, as taught by Banik et al., for the predictable result of exteriorly viewing the interior of a trocar during surgical techniques.

**21. Claims 27 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Jacobsen et al. (US Patent No. 4,180,068).**

22. Regarding claims 27 and 28, Jacobsen et al. discloses the method steps including the insertion of an instrument (24) into the lumen of a trocar catheter having substance removing means wherein irrigation of fluid is performed through a down flow lumen (27) and into the instrument lumen (16) and withdrawal of fluids is performed through the opening (20) and into the instrument lumen (25) (Figs. 1, 2).

**23. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al. ( US Patent No. 4,180,068) in view of Yoon ( US Patent No. 5,788,676).**

24. Regarding claim 29, Jacobsen et al. discloses all of the limitations previously discussed except for the method step of sealing the lumen.

Yoon discloses a trocar (10) having an insert end with a housing or "chamber" (14) wherein a pair of universal seal (16a, 16b) are positioned in the proximal and distal ends of the chamber to provide an air and fluid tight seal when engaging or not



engaging an instrument (column 2, lines 37-40, column 4, lines 1-10, column 7, lines 19-22, Fig.2).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the trocar of Jacobsen et al. with sealing means, as taught by Yoon, to prevent the escaping of gases through the portal during surgery.

**25. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobsen et al. ( US Patent No. 4,180,068) in view of Kellogg ( US Patent No. 5,968,060).**

26. Regarding claim 30, Jacobsen et al. discloses all of the limitations previously discussed except for agitation means.

Kellogg teaches an ultrasonic trocar (10) including a handpiece assembly (50), generator (30), braking mechanism (130) and an acoustic assembly (80) through which ultrasonic energy propagates to cause vibration within the acoustic assembly (column 3, lines 17-20, Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the trocar of Jacobsen et al. with vibrating means, as taught by Kellogg, to minimize trauma and detect penetration.

#### ***Response to Arguments***

27. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

28. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **JOCELIN C. TANNER** whose telephone number is (571)270-5202. The examiner can normally be reached on Monday through Thursday between 9am and 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anh Tuan Nguyen can be reached on 571-272-4963. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jocelin C. Tanner/  
6/22/2009  
Examiner, Art Unit 3731

/Anh Tuan T. Nguyen/  
Supervisory Patent Examiner, Art Unit 3731  
6/22/09